Subject Term Index

A

ABEL FUNCTION, 118, 119
ABILITIES, 97, 107
ABRASION, 18
ABSORPTION SPECTRA, 27, 38, 148, 154, 156
ABSORPTION SPECTROSCOPY, 38, 83
ACCELERATION (PHYSICS), 96
ACCELEROMETERS, 20, 21
ACCEPTOR MATERIALS, 58
ACCUMULATORS, 59
ACCURACY, 20
ACETYL COMPOUNDS, 28
ACOUSTIC COUPLING, 22, 23
ACOUSTIC MEASUREMENT, 94
ACOUSTIC PROPAGATION, 135
ACOUSTIC PROPERTIES, 3, 135
ACOUSTIC SCATTERING, 58, 64
ACOUSTICS, 60
ACOUSTO-OPTICS, 54
ACTIVE CONTROL, 3, 16, 29, 74
ACTIVE GALAXIES, 157
ACTUATORS, 3, 19, 55, 63, 70
ADAPTIVE CONTROL, 22, 23, 36
ADAPTIVE FILTERS, 21
ADAPTIVE OPTICS, 54, 155
ADHESION, 1
ADVANCED VERY HIGH RESOLUTION RADIOMETER, 87
AEROACOUSTICS, 117, 135
AEROBRAKING, 18
AERODYNAMIC CHARACTERISTICS, 2, 3
AERODYNAMIC CONFIGURATIONS, 8
AERODYNAMIC DRAG, 65
AERODYNAMIC FORCES, 6
AERODYNAMIC HEAT TRANSFER, 4
AERODYNAMIC INTERFERENCE, 95
AERODYNAMIC LOADS, 5, 8
AERODYNAMIC NOISE, 135
AEROELASTICITY, 5, 16, 60
AEROGELS, 81, 158
AERONAUTICS, 6, 95, 113, 151
AERONOMY, 86
AEROSPACE INDUSTRY, 129
AEROSPACE MEDICINE, 95
AEROSPACE PLANES, 7
AEROSPACE SYSTEMS, 132
AEROTHERMODYNAMICS, 61, 137
AFTERBURNING, 42
AIR FLOW, 22, 69
AIR MASSES, 88
AIR POLLUTION, 83
AIR WATER INTERACTIONS, 88
AIRBORNE/SPACEBORNE COMPUTERS, 20
AIRCRAFT ACCIDENTS, 98
AIRCRAFT CONTROL, 14
AIRCRAFT DESIGN, 7, 8, 9
AIRCRAFT ENGINES, 3, 13, 135
AIRCRAFT ICING, 1, 2
AIRCRAFT PERFORMANCE, 2
AIRCRAFT SAFETY, 1, 6, 98, 108
AIRCRAFT STRUCTURES, 6, 9
AIRFOILS, 4
AIRLINE OPERATIONS, 100
AIRPORTS, 15
AIRSPEED, 8
ALANINE, 136
ALASKA, 85
ALBUMINS, 93
ALGEBRA, 119, 120, 161
ALGORITHMS, 8, 12, 14, 18, 51, 52, 53, 62, 63, 72, 74, 101, 102, 103, 104, 109, 110, 111, 115, 117, 118, 120, 121, 132
ALIGNMENT, 57
ALLOYING, 32
ALLOYS, 32
ALLYL COMPOUNDS, 24
ALPHA PARTICLES, 145
ALTERNATING CURRENT, 109
ALTITUDE, 8
ALUMINIDES, 32
ALUMINUM, 18, 44, 45, 55
ALUMINUM ALLOYS, 33
ALUMINUM GALLIUM ARSENIDES, 137, 149
ALUMINUM ISOTOPES, 33
AMBIGUITY, 116
AMINES, 23
AMMONIA, 150
AMMONIUM COMPOUNDS, 45
AMMONIUM PERCHLORATES, 24
AMMUNITION, 34, 100
AMORPHOUS MATERIALS, 32, 33, 81, 133, 140, 148
ANALOGIES, 76
ANGLE OF ATTACK, 2, 4, 6, 15, 95
ANIONS, 79
ANISOTROPY, 23, 36, 66, 134
ANNIHILATION REACTIONS, 132
ANODES, 80
ANOMALIES, 20
ANTENNA ARRAYS, 53
ANTICYCLONES, 82
AORTA, 95
APOLLO 11 FLIGHT, 17
APOLLO SPACECRAFT, 17
APPLICATION SPECIFIC INTEGRATED CIRCUITS, 54
APPLICATIONS PROGRAMS (COMPUTERS), 71, 98, 111, 145
APPROACH INDICATORS, 7
AQUEOUS SOLUTIONS, 31
ARC DISCHARGES, 44
ARC HEATING, 15
ARCHITECTURE (COMPUTERS), 52, 53, 103, 107, 113
ARCTIC REGIONS, 77, 88
ARMOR, 73
ARPA COMPUTER NETWORK, 51, 68
ARTERIES, 95
ASPHALT, 73
ASTRONOMICAL MODELS, 153
ASTROPHYSICS, 61
ATMOSPHERIC BOUNDARY LAYER, 88
ATMOSPHERIC CHEMISTRY, 28
ATMOSPHERIC MODELS, 87, 88, 157
ATMOSPHERIC MOISTURE, 77
ATMOSPHERIC PRESSURE, 76
ATMOSPHERIC RADIATION, 83
ATMOSPHERIC STRATIFICATION, 89
ATOMIC CLUSTERS, 29
ATOMIC ENERGY LEVELS, 144
ATOMIC INTERACTIONS, 71, 147
ATOMIC STRUCTURE, 57, 146, 147
ATOMIZING, 13
AUDIOMETRY, 94
AUDITORY DEFECTS, 94
AUDITORY PERCEPTION, 94
AUGER SPECTROSCOPY, 68
AURORAL ZONES, 86
AURORAS, 86
AUTOMATION, 105
AVIONICS, 10
AXIAL FLOW, 11
AZIMUTH, 57
AZO COMPOUNDS, 37, 140

B

BACKSCATTERING, 85, 90
BACTERIA, 92, 140
BANDWIDTH, 51, 69
BARENTS SEA, 91
BEAM NEUTRALIZATION, 143
BEAM WAVEGUIDES, 69
BEAMFORMING, 143
BEAMS (RADIATION), 57
BEAMS (SUPPORTS), 72
BENDING, 79
BIAS, 21, 113
BINARY DATA, 106
BINARY DIGITS, 53
BINARY PHASE SHIFT KEYING, 51
BINARY STARS, 157
BIOCHEMISTRY, 76
BIODEGRADABILITY, 36
BIOLOGICAL EVOLUTION, 94
BIOLOGY, 92
BIREFRINGENCE, 140
BISMUTH, 28
BIT ERROR RATE, 51
BLAZARS, 153
BLOOD FLOW, 100
BLOWING, 5
BLUNT BODIES, 62
BOLOMETERS, 67
BOMBER AIRCRAFT, 26
BONE MINERAL CONTENT, 95
BOOSTER ROCKET ENGINES, 19
BORN APPROXIMATION, 85
BOUNDARY CONDITIONS, 62, 120, 137, 158
BOUNDARY LAYER CONTROL, 3
BOUNDARY LAYER STABILITY, 3, 65
BOUNDARY LAYERS, 65, 90
BRANCHING (MATHEMATICS), 120
BRILLOUIN EFFECT, 140
BROADBAND, 140
BROKEN SYMMETRY, 147
BROWN DWARF STARS, 157
BUCKLING, 9, 72
BUOYANCY, 123
BUOYS, 89
BURNING RATE, 47

C

CALCIUM, 93
CALCULUS OF VARIATIONS, 150
CAMERAS, 153
CANOPIES (VEGETATION), 76
CAPACITORS, 55, 56, 78, 81
CAPILLARY FLOW, 66
CARBON, 33, 38, 71
CARBON 14, 82, 134
CARBON MONOXIDE, 21, 22
CARBONATES, 86
CARBONYL COMPOUNDS, 83
CARDIOVASCULAR SYSTEM, 95, 96
CARTESIAN COORDINATES, 111
CASCADE FLOW, 11
CATALYSIS, 39
CATHODES, 79
CAUCHY PROBLEM, 121
CAVITIES, 60
CD-ROM, 152
CELL CATHODES, 80
CELLS (BIOLOGY), 94
CEMENTATION, 73
CEMENTS, 73
CERAMIC MATRIX COMPOSITES, 21, 22, 26, 39
CERAMICS, 57
CERTIFICATION, 100, 107
CESIUM, 59
CHANNELS (DATA TRANSMISSION), 53, 140
CHAOS, 52, 118
CHARGED PARTICLES, 31
CHEMICAL BONDS, 23
CHEMICAL PROPULSION, 41
CHEMICAL REACTIONS, 39
CHIPS, 139
CHIPS (ELECTRONICS), 54, 56
CHROMOPHORES, 39
CHROMOSPHERE, 155
CIRCLES (GEOMETRY), 62
CIRRUS CLOUDS, 88
CISLUNAR SPACE, 129
CIVIL AVIATION, 9, 108
CLASSIFICATIONS, 117, 119
CLAYS, 89
CLIMATE, 83
CLIMATOLOGY, 77, 85
CLOUD COVER, 77
CLOUD PHYSICS, 88
COATINGS, 1
COCKPITS, 100
CODERS, 52
CODING, 53, 105, 106
COEFFICIENT OF FRICTION, 25, 35, 38
COLD DRAWING, 37
COLLAGENS, 93
COLLISIONLESS PLASMAS, 144
COLLOIDS, 29
COLOR VISION, 99
COMBUSTIBLE FLOW, 12, 42
COMBUSTION, 13, 29
COMBUSTION CHAMBERS, 12, 13, 26, 29
COMBUSTION CHEMISTRY, 41
COMBUSTION PHYSICS, 12, 41, 42
COMBUSTION PRODUCTS, 42
COMBUSTION TEMPERATURE, 13
COMETARY COLLISIONS, 154
COMMAND AND CONTROL, 53
COMMERCIAL AIRCRAFT, 100, 108
COMMERCIAL SPACECRAFT, 130
COMMUNICATION, 53
COMMUNICATION NETWORKS, 54
COMMUNICATION THEORY, 51
COMPANION STARS, 153
COMPILERS, 52, 105
COMPLEX COMPOUNDS, 24, 39
COMPLEX SYSTEMS, 126
COMPOSITE MATERIALS, 9, 23, 26, 27, 36, 50, 58, 134
COMPOSITE PROPELLANTS, 44
COMPOSITE STRUCTURES, 5, 6, 9, 23, 25, 27, 75
COMPRESSION TESTS, 34
COMPRESSION WAVES, 64
COMPRESSIVE STRENGTH, 34
COMPUTATIONAL FLUID DYNAMICS, 5, 11, 13, 41, 60, 61, 64, 65, 111, 117
COMPUTATIONAL GRIDS, 110
COMPUTER AIDED DESIGN, 64
COMPUTER ASSISTED INSTRUCTION, 131
COMPUTER INFORMATION SECURITY, 105, 111, 112, 128
COMPUTER NETWORKS, 52, 103
COMPUTER PROGRAM INTEGRITY, 105, 128
COMPUTER PROGRAMMING, 102, 104, 105, 107
COMPUTER PROGRAMS, 14, 48, 64, 67, 68, 74, 102, 106, 109, 110, 112, 116
COMPUTER SYSTEMS DESIGN, 107
COMPUTER SYSTEMS PERFORMANCE, 112
COMPUTER SYSTEMS PROGRAMS, 103
COMPUTER TECHNIQUES, 12, 98, 99
COMPUTER VISION, 116
COMPUTERIZED SIMULATION, 5, 12, 52, 53, 57, 61, 63, 65, 67, 103, 104, 108, 124, 141, 142, 144, 145
COMPUTERS, 101, 113
CONCRETES, 134
CONDENSATION NUCLEI, 87

CONDUCTION BANDS, 27
CONFERENCES, 41, 53, 78
CONFIDENCE LIMITS, 125
CONGRUENCES, 118, 161
CONNECTION MACHINE, 102
CONSCIOUSNESS, 102
CONSUMABLES (SPACECRAFT), 127
CONTAMINANTS, 24, 76
CONTAMINATION, 82
CONTINUUM MODELING, 117
CONTINUUMS, 63
CONTRACTORS, 127
CONTROL THEORY, 14
CONTROLLABILITY, 120
CONTROLLERS, 18
CONVECTION, 49, 150
CONVECTIVE HEAT TRANSFER, 137
CONVERGENCE, 60, 62
CONVEXITY, 109
COORDINATES, 120
COPOLYMERS, 38
COPPER, 28
COPPER OXIDES, 29
CORES, 89
CORNERS, 66
CORONAS, 161
CORRELATION COEFFICIENTS, 144
CORROSION RESISTANCE, 31
COST ANALYSIS, 75, 129
COST EFFECTIVENESS, 81, 100, 125, 126, 131
COST REDUCTION, 123, 125, 127, 130, 131, 132
CRACKS, 25
CRASHES, 6
CREW WORKSTATIONS, 100
CRITERIA, 7
CRITICAL TEMPERATURE, 77
CROSS FLOW, 13, 69
CROSS RELAXATION, 136
CRUSTS, 85
CRYOGENIC STORAGE, 80
CRYSTAL GROWTH, 49
CRYSTAL LATTICES, 32
CRYSTAL STRUCTURE, 147, 149
CRYSTAL SURFACES, 148
CRYSTALLINITY, 138
CRYSTALLOGRAPHY, 147
CRYSTALS, 43, 68, 147
CURRENT DENSITY, 59
CYCLIC LOADS, 130
CYCLOTRON RESONANCE, 142
CYLINDRICAL BODIES, 135
CYLINDRICAL SHELLS, 73

D

DAMAGE, 70
DATA ACQUISITION, 7, 8, 14, 76
DATA BASES, 106, 122
DATA LINKS, 106
DATA MANAGEMENT, 115
DATA PROCESSING, 20, 54
DATA STRUCTURES, 52
DATA SYSTEMS, 152
DATA TRANSMISSION, 51, 54, 106
DECISION MAKING, 84, 108
DECISION THEORY, 84
DECOMPOSITION, 132, 137
DEFENSE PROGRAM, 83, 130
DEFLAGRATION, 42, 44, 47
DEFORESTATION, 83
DEFORMATION, 73
DEGRADATION, 35
DELAY LINES, 139
DELTA MODULATION, 52
DEMODULATORS, 53
DENSITY DISTRIBUTION, 33
DEPENDENT VARIABLES, 127
DEPOSITION, 28
DESCENT TRAJECTORIES, 62
DESIGN ANALYSIS, 7, 26, 79, 127, 143
DESIGN TO COST, 7
DESTRUCTIVE TESTS, 42
DETONABLE GAS MIXTURES, 42
DETONATION, 41, 42, 43, 44, 45, 46, 48
DEUTERIUM, 156
DIAMOND FILMS, 38, 141, 149
DIAMONDS, 27
DIELECTRIC PROPERTIES, 28, 96
DIELECTRICS, 23, 28
DIFFERENCE EQUATIONS, 120, 161
DIFFRACTION, 37
DIFFRACTION PATTERNS, 40
DIFFUSE RADIATION, 155
DIFFUSERS, 2
DIFFUSION, 27
DIGITAL DATA, 54
DIGITAL FILTERS, 20
DIGITAL SYSTEMS, 110
DIGITAL TECHNIQUES, 106
DIPOLE MOMENTS, 28
DIRECT CURRENT, 134
DISILICIDES, 148
DISPLAY DEVICES, 100
DISSOCIATION, 136
DISTORTION, 116
DISTRIBUTED PROCESSING, 52, 103, 107, 113
DISTRIBUTION FUNCTIONS, 8
DIURNAL VARIATIONS, 91
DIVERTERS, 143
DIVERTORS (FUSION REACTORS), 143
DOCUMENTATION, 110, 151
DRAG REDUCTION, 4
DRIFT, 134
DROP TOWERS, 66
DROPS (LIQUIDS), 87
DUCT GEOMETRY, 62
DUCTED FLOW, 62, 135
DUCTS, 62
DYNAMIC CHARACTERISTICS, 14, 115
DYNAMIC PRESSURE, 5, 95
DYNAMIC PROGRAMMING, 118
DYNAMIC RANGE, 69
DYNAMIC RESPONSE, 73
DYNAMICAL SYSTEMS, 29

E

EAR, 94
EARTH SURFACE, 88
ECONOMIC FACTORS, 7, 130, 131
ECONOMIC IMPACT, 7
ECOSYSTEMS, 77
EDGES, 120
EDUCATION, 10, 77, 97, 98, 107, 113, 129, 131
EFFICIENCY, 132
EGGS, 93
EIGENVALUES, 47, 118
EIGENVECTORS, 103
ELASTIC CYLINDERS, 135
ELASTIC PROPERTIES, 26
ELASTIC SHELLS, 135
ELASTOMERS, 35
ELASTOPLASTICITY, 34
ELECTRIC BATTERIES, 56, 58, 81
ELECTRIC ENERGY STORAGE, 78
ELECTRIC FIELDS, 31, 134, 142, 144, 146
ELECTRIC POTENTIAL, 31, 55, 59, 115
ELECTRICAL IMPEDANCE, 67
ELECTRICAL MEASUREMENT, 56
ELECTRICAL PROPERTIES, 40
ELECTRICAL RESISTIVITY, 30
ELECTRO-OPTICAL EFFECT, 39
ELECTRO-OPTICS, 51, 57, 60
ELECTROACOUSTIC TRANSDUCERS, 60
ELECTROCATALYSTS, 80
ELECTROCHEMICAL CELLS, 78, 81
ELECTROCHEMISTRY, 55

ELECTRODE MATERIALS, 78, 79, 81
ELECTRODES, 28, 78, 79, 80
ELECTROLYSIS, 81, 100
ELECTROLYTES, 28, 31, 55, 79, 80, 81
ELECTROMAGNETIC FIELDS, 138
ELECTROMAGNETIC INTERACTIONS, 90
ELECTROMAGNETIC PROPERTIES, 90
ELECTROMAGNETIC PULSES, 56
ELECTROMAGNETIC RADIATION, 53
ELECTROMAGNETIC SCATTERING, 85
ELECTROMECHANICAL DEVICES, 35, 55
ELECTRON ACCELERATION, 144
ELECTRON ATTACHMENT, 136
ELECTRON BEAMS, 57, 69
ELECTRON CAPTURE, 138
ELECTRON CYCLOTRON HEATING, 142, 146
ELECTRON DENSITY PROFILES, 144
ELECTRON ENERGY, 69, 145
ELECTRON GAS, 67
ELECTRON MICROSCOPES, 68
ELECTRON PARAMAGNETIC RESONANCE, 136
ELECTRON PRESSURE, 145
ELECTRON RECOMBINATION, 138
ELECTRON SCATTERING, 150
ELECTRON SPECTROSCOPY, 68
ELECTRON SPIN, 136
ELECTRON TRANSFER, 27
ELECTRONIC WARFARE, 52, 53, 106
ELECTRORHEOLOGICAL FLUIDS, 74
ELECTROSTATIC CHARGE, 44, 100
ELECTROSTATICS, 28, 134, 142
ELECTROSTRICTION, 23, 35, 36
EMBEDDING, 140
EMBRYOS, 93
EMISSION SPECTRA, 15, 33, 138
EMITTANCE, 88
EMITTERS, 59
ENERGETIC PARTICLES, 142
ENERGY ABSORPTION, 148
ENERGY CONVERSION, 144
ENERGY STORAGE, 70, 80, 81
ENERGY TRANSFER, 63, 86, 137
ENGINE DESIGN, 21, 26
ENGINE INLETS, 135
ENGINE NOISE, 3
ENGINE TESTS, 10
ENTROPY, 142
ENVIRONMENT MANAGEMENT, 83
ENVIRONMENT PROTECTION, 24, 82, 83
ENVIRONMENTAL TESTS, 127
EPHEMERIDES, 159
EPITAXY, 148, 149
EPOXY MATRIX COMPOSITES, 74
EQUATIONS OF STATE, 61, 73
EQUIVALENT CIRCUITS, 67
ERGOMETERS, 96
ERROR ANALYSIS, 122
ERROR CORRECTING CODES, 105
ERROR DETECTION CODES, 53
ESCAPE CAPSULES, 126
ESTIMATES, 116
ESTIMATING, 62
ETCHING, 149
ETHICS, 107
EUCLIDEAN GEOMETRY, 119
EULER EQUATIONS OF MOTION, 118
EULER-CAUCHY EQUATIONS, 64
EUTECTIC ALLOYS, 32
EXCITATION, 19
EXHAUST EMISSION, 22
EXHAUST GASES, 22
EXPERIMENT DESIGN, 8, 42
EXPLOSIONS, 47, 49
EXPLOSIVES, 43, 44, 45, 46, 48
EXPONENTIAL FUNCTIONS, 84
EXTRASOLAR PLANETS, 153, 157
EXTRAVEHICULAR ACTIVITY, 124
EYE MOVEMENTS, 97

F

F-15 AIRCRAFT, 100
F-16 AIRCRAFT, 100
F-18 AIRCRAFT, 15
FAIL-SAFE SYSTEMS, 74
FAILURE, 26
FAILURE ANALYSIS, 107, 125, 126, 130
FAR ULTRAVIOLET RADIATION, 137
FATIGUE (MATERIALS), 25
FATIGUE LIFE, 31
FAULT DETECTION, 20, 71, 130
FAULT TOLERANCE, 109
FEEDBACK, 14, 99
FEEDBACK CONTROL, 3
FERROELECTRICITY, 37
FERROMAGNETIC MATERIALS, 134
FERROUS METALS, 29
FIBER COMPOSITES, 26, 35
FIBER OPTICS, 15, 60, 140
FIBROBLASTS, 93
FIGHTER AIRCRAFT, 2, 14
FILE MAINTENANCE (COMPUTERS), 112, 114
FILM COOLING, 13
FINE STRUCTURE, 144
FINGERS, 100
FINITE DIFFERENCE THEORY, 64, 117, 135
FINITE ELEMENT METHOD, 5, 14, 50, 72, 73, 117
FINITE VOLUME METHOD, 63
FIR FILTERS, 52
FIRE PREVENTION, 6
FISHES, 94
FIXED POINTS (MATHEMATICS), 119
FLAT PLATES, 3
FLEXURAL STRENGTH, 40, 79
FLIGHT CHARACTERISTICS, 4
FLIGHT CLOTHING, 100
FLIGHT ENVELOPES, 15, 64
FLIGHT INSTRUMENTS, 100
FLIGHT RECORDERS, 8
FLIGHT SAFETY, 98
FLIGHT SIMULATION, 10, 93
FLIGHT STRESS (BIOLOGY), 95
FLIGHT TESTS, 2, 4, 7, 9, 14, 56
FLOW CHARACTERISTICS, 12, 66
FLOW CHARTS, 128
FLOW DISTRIBUTION, 2, 11, 13, 15, 17, 49, 63, 65, 76, 102
FLOW GEOMETRY, 111
FLOW MEASUREMENT, 12, 95
FLOW VISUALIZATION, 3, 63, 64, 69, 102, 104
FLUID DYNAMICS, 151
FLUID FLOW, 62, 134
FLUORINE, 23
FLUTTER ANALYSIS, 5, 14
FLUX DENSITY, 55
FOIL BEARINGS, 71
FORCED VIBRATION, 22
FOREBODIES, 61
FORECASTING, 84, 88
FORTRAN, 102
FOURIER ANALYSIS, 119
FOURIER TRANSFORMATION, 161
FRACTURING, 43
FRAGMENTS, 154
FREE FLIGHT, 108
FREQUENCY DISCRIMINATORS, 138
FREQUENCY DISTRIBUTION, 84
FREQUENCY HOPPING, 54
FRICTION, 71
FUEL CELLS, 80
FUEL COMBUSTION, 12
FUEL INJECTION, 13
FUNCTIONAL DESIGN SPECIFICATIONS, 10, 109

FUNCTIONALS, 23
FUSELAGES, 9

G

GALACTIC BULGE, 158
GALACTIC RADIATION, 156
GALAXIES, 156, 158
GALERKIN METHOD, 29
GALLIUM ARSENIDES, 149
GAMMA RAY LASERS, 70
GAMMA RAY SPECTROMETERS, 67
GAMMA RAYS, 153
GAS ATOMIZATION, 133
GAS BEARINGS, 71, 86
GAS DISSOCIATION, 27
GAS DYNAMICS, 63
GAS FLOW, 17
GAS INJECTION, 69
GAS TURBINE ENGINES, 12, 13, 26
GAS TURBINES, 12, 13
GAUSS EQUATION, 150
GEARS, 71
GELS, 82, 134
GEOCHEMISTRY, 86
GEOGRAPHIC INFORMATION SYSTEMS, 134, 152
GEOLOGY, 86
GEOMAGNETISM, 160
GEOSYNCHRONOUS ORBITS, 129
GEOTECHNICAL ENGINEERING, 89
GEOTHERMAL RESOURCES, 76
GERMANIUM ALLOYS, 30
GIACOBINI-ZINNER COMET, 159
GLASS FIBER REINFORCED PLASTICS, 26
GLASS FIBERS, 74
GLASS TRANSITION TEMPERATURE, 35
GLOVES, 100
GOVERNMENT/INDUSTRY RELATIONS, 130, 131
GRAIN SIZE, 33
GRANULAR MATERIALS, 44
GRAPH THEORY, 132
GRAPHITE-EPOXY COMPOSITES, 25, 74
GRATINGS (SPECTRA), 37
GRAVIMETRY, 55
GRAVIRECEPTORS, 94
GRAVITATIONAL EFFECTS, 66, 92, 93, 95
GRAVITATIONAL FIELDS, 159
GRAVITATIONAL PHYSIOLOGY, 92
GRAVITY WAVES, 86
GRID GENERATION (MATHEMATICS), 111
GROOVES, 150
GROUND OPERATIONAL SUPPORT SYSTEM, 123
GROUND PENETRATING RADAR, 76
GROUND STATE, 29
GROUND SUPPORT EQUIPMENT, 124
GROUND TESTS, 7
GROUND WATER, 76
GROUP THEORY, 119
GUNN DIODES, 56
GUST LOADS, 16
GYRES, 85

H

H LINES, 156
HAZARDS, 41, 42, 44, 48, 49, 100
HEAD-UP DISPLAYS, 100
HEARING, 94
HEAT FLUX, 27
HEAT OF DISSOCIATION, 23, 136
HEAT PIPES, 150
HEAT SHIELDING, 137
HEAT TRANSFER, 150
HEATING, 158
HEISENBERG THEORY, 134
HELICAL WINDINGS, 143
HELIOTRONS, 142, 143, 146
HELIPORTS, 7
HELIUM, 69, 154
HERMETIC SEALS, 55
HEURISTIC METHODS, 101, 108, 110
HIGH CURRENT, 55
HIGH FREQUENCIES, 85, 94
HIGH RESOLUTION, 53, 96
HIGH REYNOLDS NUMBER, 5, 63
HIGH STRENGTH, 39
HIGH TEMPERATURE, 26, 36
HIGH TEMPERATURE LUBRICANTS, 25
HISTORIES, 128
HMX, 43, 44, 45, 46, 47, 48
HOLOGRAPHY, 140
HOMOGENEOUS TURBULENCE, 65
HOMOLOGY, 119, 120
HOMOMORPHISMS, 120
HONEYCOMB STRUCTURES, 22
HOT ELECTRONS, 67
HTPB PROPELLANTS, 44, 45, 46
HUBBLE SPACE TELESCOPE, 124, 153
HUGONIOT EQUATION OF STATE, 43, 45
HUMAN BEHAVIOR, 99
HYBRID STRUCTURES, 74
HYDROCARBON COMBUSTION, 12
HYDROCARBON FUELS, 41
HYDROCARBONS, 24
HYDRODYNAMICS, 61, 71
HYDROGEN, 23, 27, 40
HYDROGEN BONDS, 40
HYDROGEOLOGY, 76
HYDROPHONES, 69
HYPERBOLIC DIFFERENTIAL EQUATIONS, 121
HYPERSONIC FLOW, 62, 137
HYPERSONIC WIND TUNNELS, 17
HYPOTHESES, 99
HYSTERESIS, 36

I

ICE FORMATION, 1, 2, 134
IDEAL GAS, 17
ILLUSIONS, 99
IMAGE ANALYSIS, 153
IMAGE ENHANCEMENT, 102
IMAGE PROCESSING, 51, 115, 116, 141
IMAGING TECHNIQUES, 38, 96
IMPACT DAMAGE, 44
IMPACT LOADS, 26, 43, 44, 46
INCINERATORS, 22
INCOMPRESSIBLE FLOW, 61
INDEPENDENT VARIABLES, 121
INDIUM PHOSPHIDES, 149
INFERENCE, 122
INFORMATION MANAGEMENT, 98, 110
INFORMATION RESOURCES MANAGEMENT, 151
INFORMATION RETRIEVAL, 104
INFORMATION SYSTEMS, 114
INFORMATION TRANSFER, 51, 128, 129
INFRARED ABSORPTION, 27
INFRARED RADIATION, 24, 88, 154
INFRARED SPECTRA, 24
INFRARED TELESCOPES, 154
INHOMOGENEITY, 85
INITIATION, 43
INITIATORS (EXPLOSIVES), 100
INJECTORS, 146
INPUT/OUTPUT ROUTINES, 111, 112, 114
INTEGERS, 103
INTEGRATED CIRCUITS, 52
INTELLECTUAL PROPERTY, 152
INTERATOMIC FORCES, 33

INTERFACIAL TENSION, 117
INTERGALACTIC MEDIA, 154
INTERMETALLICS, 30, 32
INTERNAL PRESSURE, 55
INTERNATIONAL SPACE STATION, 123, 124, 125, 126, 127, 128
INTERNET RESOURCES, 98
INTERNETS, 95, 113
INTERPLANETARY DUST, 158
INTERPLANETARY MAGNETIC FIELDS, 86
INTERPLANETARY MEDIUM, 160
INTERSTELLAR GAS, 156, 160
INTERSTELLAR MATTER, 38, 138, 155, 158
INTERSTELLAR RADIATION, 155
INVENTORY MANAGEMENT, 126, 128, 130, 131, 151
INVERSE SCATTERING, 121
ION BEAMS, 146
ION CURRENTS, 136
ION IMPLANTATION, 38
ION SOURCES, 146
ION TEMPERATURE, 142, 146
ION TRAPS (INSTRUMENTATION), 93
IONIZATION CROSS SECTIONS, 136
IRON ALLOYS, 32, 33
ISING MODEL, 134
ISOMERIZATION, 140
ISOTROPIC TURBULENCE, 66
ITERATIVE SOLUTION, 135, 150
IUE, 155

J

JAMMING, 54
JET AIRCRAFT NOISE, 3, 135
JET ENGINE FUELS, 41
JET MIXING FLOW, 135
JOINTS (JUNCTIONS), 23
JOURNAL BEARINGS, 70

K

KELVIN-HELMHOLTZ INSTABILITY, 62
KERNEL FUNCTIONS, 120, 161
KINEMATICS, 96
KINETICS, 96
KNOWLEDGE BASED SYSTEMS, 109
KOLMOGOROV THEORY, 66, 117
KOREA, 83

L

LAGRANGIAN FUNCTION, 61
LAKE ICE, 77
LAMINAR FLOW, 65
LAMINATES, 25, 74
LAND ICE, 77
LASER ANNEALING, 35
LASER INDUCED FLUORESCENCE, 12, 15
LASER MATERIALS, 139
LASER OUTPUTS, 70
LATTICE PARAMETERS, 149
LAUNCH COSTS, 123, 130
LAUNCH VEHICLES, 123, 130
LAW (JURISPRUDENCE), 83, 152
LEACHING, 35
LEAST SQUARES METHOD, 20, 21, 62, 117
LECTURES, 36
LENS DESIGN, 141
LENSES, 141
LIBRARIES, 105, 110, 111
LIE GROUPS, 120
LIFE CYCLE COSTS, 124, 125, 126, 127, 129, 131
LIFE SCIENCES, 151
LIFT DRAG RATIO, 4
LIGANDS, 24, 29
LIGHT BEAMS, 54
LIGHT CURVE, 154, 159
LIGHT EMISSION, 138
LIGHT EMITTING DIODES, 138
LIGHT MODULATION, 138
LIGHT MODULATORS, 141
LINE SPECTRA, 154
LINEAR EQUATIONS, 120, 161
LINEAR FILTERS, 117
LINEAR OPERATORS, 119
LINEAR PREDICTION, 122
LINEAR PROGRAMMING, 121
LINEAR SYSTEMS, 119
LINEAR TRANSFORMATIONS, 14
LIQUID CHROMATOGRAPHY, 31
LIQUID CRYSTALS, 32, 141
LIQUID INJECTION, 13
LIQUID ROCKET PROPELLANTS, 41
LIQUID WASTES, 22
LITHIUM, 31
LITHOGRAPHY, 69
LOAD CARRYING CAPACITY, 50, 134
LOADS (FORCES), 6, 9, 50, 71, 109
LOCAL AREA NETWORKS, 114
LOCI, 116
LOGISTICS MANAGEMENT, 123, 124, 125, 126, 127, 128, 129, 131, 132, 151
LONG DURATION SPACE FLIGHT, 96
LOW EARTH ORBITS, 21
LOW TEMPERATURE, 30
LOWER BODY NEGATIVE PRESSURE, 96
LUBRICATION, 38
LUMBAR REGION, 6
LUMINANCE, 99
LUMINESCENCE, 138
LUNAR BASES, 129
LUNAR EXPLORATION, 129
LUNAR LANDING, 17
LUNAR LOGISTICS, 129
LUNAR ORBITS, 129
LUNAR SHELTERS, 80
LYMAN ALPHA RADIATION, 156, 160

M

MAGELLAN SPACECRAFT (NASA), 159
MAGNETIC BEARINGS, 70
MAGNETIC DISTURBANCES, 160
MAGNETIC FIELD CONFIGURATIONS, 143, 144
MAGNETIC FIELD RECONNECTION, 144
MAGNETIC FIELDS, 56, 57, 136, 143
MAGNETIC FLUX, 144
MAGNETIC MATERIALS, 133
MAGNETIC MOMENTS, 33
MAGNETIC PERMEABILITY, 30
MAGNETIC PROPERTIES, 68
MAGNETIC RECORDING, 68
MAGNETIC STARS, 153
MAGNETOHYDRODYNAMIC STABILITY, 142
MAGNETOHYDRODYNAMIC WAVES, 145
MAGNETOHYDRODYNAMICS, 144
MAIN SEQUENCE STARS, 155
MAINTAINABILITY, 124, 127, 128
MAINTENANCE, 125, 127, 128
MAN MACHINE SYSTEMS, 108
MANAGEMENT PLANNING, 17, 131, 132
MANAGEMENT SYSTEMS, 113
MANIFOLDS (MATHEMATICS), 65, 119
MAPPING, 85, 118
MARINE BIOLOGY, 92
MARINE ENVIRONMENTS, 90
MARINE METEOROLOGY, 88

MARKOV PROCESSES, 85
MARS LANDING, 18
MARS PATHFINDER, 18, 61
MARS SURFACE, 18, 155
MARTENSITE, 147
MASS FLOW RATE, 3
MASS SPECTRA, 31
MASS SPECTROMETERS, 93
MASS SPECTROSCOPY, 31, 93
MASS TRANSFER, 148
MASSIVELY PARALLEL PROCESSORS, 51, 109, 111
MATHEMATICAL MODELS, 12, 34, 47, 48, 49, 65, 73, 85, 87, 102, 116, 118, 120, 121, 122, 126, 127, 129
MATRICES (MATHEMATICS), 103
MATRIX MATERIALS, 74
MAXIMUM LIKELIHOOD ESTIMATES, 97, 122
MEAN SQUARE VALUES, 52
MEASURING INSTRUMENTS, 60
MECHANICAL PROPERTIES, 19, 37, 73
MEMBRANES, 55
MEMORY (COMPUTERS), 101, 103
MERCURY COMPOUNDS, 49
MESH, 120
MESOSCALE PHENOMENA, 91
METAL BONDING, 19
METAL CLUSTERS, 29
METAL CRYSTALS, 33, 147, 148
METAL FIBERS, 78
METAL FILMS, 57, 149
METAL HYDRIDES, 58
METAL IONS, 31, 80
METAL JOINTS, 19, 34
METAL MATRIX COMPOSITES, 34
METAL PARTICLES, 45
METAL PROPELLANTS, 44, 45
METAL SURFACES, 1, 31, 40, 68
METALORGANIC CHEMICAL VAPOR DEPOSITION, 60, 149
METALS, 28, 35, 71
METAMORPHISM (GEOLOGY), 134, 155
METEORITES, 155
METEOROLOGICAL PARAMETERS, 88, 106
METHOD OF CHARACTERISTICS, 117
METHODOLOGY, 72
METHYL COMPOUNDS, 23, 24
METROLOGY, 68
MICROBIOLOGY, 92
MICROCHANNEL PLATES, 139
MICROFIBERS, 78
MICROGRAVITY, 20, 21, 95
MICROMECHANICS, 34
MICROORGANISMS, 92
MICROPARTICLES, 29
MICROSCOPY, 32
MICROSTRUCTURE, 33, 73
MICROWAVE FREQUENCIES, 136
MICROWAVE SOUNDING, 82
MICROWAVES, 149
MILITARY OPERATIONS, 128, 130
MILITARY TECHNOLOGY, 128
MIS (SEMICONDUCTORS), 59
MISSION PLANNING, 124, 126, 128, 129, 151
MIXERS, 135
MIXING LAYERS (FLUIDS), 66
MODAL RESPONSE, 19
MODELS, 76, 111, 112
MODEMS, 54
MODULATION, 59
MODULATION TRANSFER FUNCTION, 90
MODULATORS, 52, 53
MODULUS OF ELASTICITY, 40
MOLECULAR BEAM EPITAXY, 58, 59
MOLECULAR BEAMS, 137
MOLECULAR CHAINS, 40, 148
MOLECULAR CLUSTERS, 29
MOLECULAR COLLISIONS, 150
MOLECULAR INTERACTIONS, 40
MOLECULAR RELAXATION, 148
MOLECULAR STRUCTURE, 37, 40, 148
MOLECULES, 39, 137
MOLYBDENUM, 145
MONOTONE FUNCTIONS, 64
MONTE CARLO METHOD, 27, 61, 62, 63, 142
MOUNTING, 68
MULTIDISCIPLINARY DESIGN OPTIMIZATION, 8, 64
MULTIDISCIPLINARY RESEARCH, 17
MULTIMEDIA, 110
MULTIPATH TRANSMISSION, 54
MULTIPLIERS, 119
MULTIPROCESSING (COMPUTERS), 112, 114
MULTIPROGRAMMING, 106

N

N-TYPE SEMICONDUCTORS, 59
NARROWBAND, 56
NASA PROGRAMS, 129
NAVIER-STOKES EQUATION, 2, 3, 11, 13, 17, 60, 61, 63, 64, 117
NAVIGATION, 115
NAVY, 97
NEAR FIELDS, 68
NEGATIVE IONS, 146
NETHERLANDS, 72
NETWORK CONTROL, 115
NEURAL NETS, 71, 115, 139
NEURONS, 115
NEUROPHYSIOLOGY, 115
NEUTRAL ATMOSPHERES, 89
NEUTRAL BEAMS, 143, 146
NEUTRAL BUOYANCY SIMULATION, 123
NICKEL, 58
NICKEL ALLOYS, 33, 147
NICKEL CADMIUM BATTERIES, 78, 80
NICKEL COMPOUNDS, 33
NICKEL HYDROGEN BATTERIES, 78, 79, 80
NITRAMINE PROPELLANTS, 46, 47
NITROGEN DIOXIDE, 28
NITROUS OXIDES, 136
NOISE INTENSITY, 147
NOISE MEASUREMENT, 135
NOISE TEMPERATURE, 67
NONEQUILIBRIUM FLOW, 62
NONLINEAR EQUATIONS, 75
NONLINEAR FILTERS, 117
NONLINEAR PROGRAMMING, 74
NONLINEAR SYSTEMS, 29
NONLINEARITY, 72, 86, 120
NORTHERN HEMISPHERE, 82
NOZZLE GEOMETRY, 3
NUCLEAR BINDING ENERGY, 29
NUCLEAR MAGNETIC RESONANCE, 24, 132
NUCLEAR RELAXATION, 136
NUMERICAL ANALYSIS, 62, 72, 120, 121
NYLON (TRADEMARK), 37

O

OBJECT-ORIENTED PROGRAMMING, 103, 106
OBSERVATION, 108
OCEAN BOTTOM, 64
OCEAN CURRENTS, 91
OCEAN DYNAMICS, 91
OCEAN MODELS, 91
OCEAN SURFACE, 88
OCEANS, 90

OHMS LAW, 145
OMNIDIRECTIONAL ANTENNAS, 138
OPERATING TEMPERATURE, 26
OPTICAL COMMUNICATION, 51, 138, 139, 140
OPTICAL CORRELATORS, 141
OPTICAL EQUIPMENT, 57, 140
OPTICAL ILLUSION, 97
OPTICAL MATERIALS, 141
OPTICAL MEASUREMENT, 15
OPTICAL PROPERTIES, 148
OPTICAL RADAR, 88
OPTICAL SWITCHING, 140
OPTICAL WAVEGUIDES, 39, 60, 139, 141
OPTIMIZATION, 52, 75, 122
OPTOELECTRONIC DEVICES, 57, 139, 147
ORBIT INSERTION, 18
ORBITAL ELEMENTS, 159
ORBITAL MANEUVERING VEHICLES, 128
ORBITAL RENDEZVOUS, 129
ORBITAL SERVICING, 130
ORDER-DISORDER TRANSFORMATIONS, 138
ORDNANCE, 6
ORGANIC COMPOUNDS, 22, 39
ORGANIC NITRATES, 28
ORGANIC SOLIDS, 148
ORIENTATION, 148
OSCILLATIONS, 5
OXIDATION, 32
OXIDIZERS, 40
OXYGEN, 39, 96
OXYGEN SUPPLY EQUIPMENT, 100
OZONE, 82, 109

P

P WAVES, 85
P-I-N JUNCTIONS, 137
P-TYPE SEMICONDUCTORS, 59
PACKET SWITCHING, 114
PACKETS (COMMUNICATION), 54
PAINTS, 10
PANEL METHOD (FLUID DYNAMICS), 95
PARABOLIC DIFFERENTIAL EQUATIONS, 121
PARALLEL COMPUTERS, 52, 106, 113
PARALLEL PLATES, 56
PARALLEL PROCESSING (COMPUTERS), 51, 52, 53, 65, 102, 106, 110, 111, 112
PARALLEL PROGRAMMING, 102, 111
PARAMAGNETISM, 33
PARAMETER IDENTIFICATION, 19
PARTIAL DIFFERENTIAL EQUATIONS, 47, 116, 117, 120, 121
PARTICULATES, 73
PATENT POLICY, 36, 152
PATTERN RECOGNITION, 115
PAVEMENTS, 15
PAYLOAD INTEGRATION, 128
PENETRATION, 56, 73
PEPTIDES, 31
PERFORMANCE TESTS, 1, 55, 103, 145
PERIODIC VARIATIONS, 85, 120, 160, 161
PERMAFROST, 76
PERMANENT MAGNETS, 133
PERMEATING, 27
PERMITTIVITY, 85
PERSONNEL MANAGEMENT, 99
PERTURBATION, 57
PETN, 42
PETROGRAPHY, 155
PHASE SHIFT, 118
PHASE TRANSFORMATIONS, 28, 32
PHASED ARRAYS, 54
PHONONS, 137
PHOTOABSORPTION, 138
PHOTOCHEMICAL REACTIONS, 140
PHOTODISSOCIATION, 137
PHOTOELECTRIC EMISSION, 57, 146
PHOTOIONIZATION, 137
PHOTOLUMINESCENCE, 147, 149
PHOTOLYSIS, 28
PHOTONS, 57
PHOTOREFRACTIVITY, 141
PHOTOSPHERE, 153
PHYSICAL EXERCISE, 96
PHYSICAL SCIENCES, 133
PHYSIOLOGICAL EFFECTS, 93, 96
PHYSIOLOGICAL TESTS, 96
PIEZOELECTRIC CERAMICS, 22
PIEZOELECTRIC TRANSDUCERS, 22, 23, 36, 67
PIEZOELECTRICITY, 37
PILOT PERFORMANCE, 100, 108
PIONEER VENUS 1 SPACECRAFT, 159
PITCH (INCLINATION), 97
PITCHING MOMENTS, 17
PLANE WAVES, 64
PLANETS, 155
PLANNING, 98
PLASMA CONTROL, 142
PLASMA DIAGNOSTICS, 144
PLASMA HEATING, 142, 144
PLASMA TURBULENCE, 142
PLASTIC DEFORMATION, 46, 73
PLASTIC PROPELLANTS, 45
PLASTICIZERS, 37
PLASTICS, 36
PLATINUM, 18, 28
POINT SPREAD FUNCTIONS, 153
POLAR SUBSTORMS, 86
POLARIMETRY, 85, 90
POLARIZATION (CHARGE SEPARATION), 37
POLLUTION CONTROL, 22, 24
POLYCHLORINATED BIPHENYLS, 24
POLYCYCLIC AROMATIC HYDROCARBONS, 38, 138
POLYMERIC FILMS, 37, 140
POLYMERS, 36
POLYMETHYL METHACRYLATE, 69
POLYNOMIALS, 119
POLYTETRAFLUOROETHYLENE, 35, 148
POLYURETHANE RESINS, 35
POLYVINYL FLUORIDE, 37
POROSITY, 73
POROUS MATERIALS, 46, 47, 81
PORTABLE EQUIPMENT, 93
POSTURE, 96
POTASSIUM, 80
POTASSIUM HYDROXIDES, 79, 80
POTENTIAL FLOW, 134
POWDER (PARTICLES), 30, 32, 40, 133
POWER SERIES, 120
PRECIPITATION (METEOROLOGY), 86
PREDICTION ANALYSIS TECHNIQUES, 127
PRESSURE DISTRIBUTION, 3, 11
PRESSURE GRADIENTS, 145
PRESSURE MEASUREMENT, 3, 10
PRESSURE RECOVERY, 2
PRESSURE SENSORS, 68
PRESSURE VESSELS, 79
PRIORITIES, 129
PROBABILITY DENSITY FUNCTIONS, 75
PROBABILITY THEORY, 7, 8, 125
PROCUREMENT MANAGEMENT, 72, 131
PROCUREMENT POLICY, 131, 132
PRODUCTIVITY, 105, 132
PROJECT MANAGEMENT, 17, 131, 132
PROJECTILES, 56
PROPELLANT BINDERS, 45, 46

PROPELLANT COMBUSTION, 41
PROPELLANT DECOMPOSITION, 41, 42, 46, 47, 48, 49
PROPELLANT EXPLOSIONS, 44
PROPELLANT PROPERTIES, 48, 49
PROPELLANT SENSITIVITY, 41, 42, 43, 44, 45, 46
PROPELLANT TESTS, 42, 44
PROPULSION, 133
PROPULSION SYSTEM CONFIGURATIONS, 8, 21
PROPULSION SYSTEM PERFORMANCE, 21
PROTECTIVE COATINGS, 32
PROTOCOL (COMPUTERS), 105, 111, 112
PROTONS, 80
PROTOZOA, 86
PULSE COMMUNICATION, 54
PULSED LASER DEPOSITION, 35
PULSED LASERS, 69
PYRIDINES, 24
PYROLYSIS, 93
PYROTECHNICS, 43

Q

QUADRATIC PROGRAMMING, 74
QUADRATURE AMPLITUDE MODULATION, 51
QUALITY CONTROL, 55
QUANTUM WELLS, 58
QUENCHING (COOLING), 37
QUEUEING THEORY, 121
QUOTIENTS, 119

R

RADAR, 54
RADAR RECEIVERS, 52
RADIATION ABSORPTION, 154
RADIATIVE HEAT TRANSFER, 137
RADIATIVE RECOMBINATION, 58
RADIATIVE TRANSFER, 76, 88
RADIO DIRECTION FINDERS, 90
RADIO GALAXIES, 156
RADIO JETS (ASTRONOMY), 153
RAIN, 88
RANDOM VARIABLES, 121
RANGEFINDING, 115
RARE EARTH ALLOYS, 133
RATS, 93
RAYLEIGH NUMBER, 49
RAYLEIGH SCATTERING, 69
RDX, 46
REACTING FLOW, 46
REACTION KINETICS, 48, 149
REACTIVITY, 29, 39
REACTOR DESIGN, 143
READ-ONLY MEMORY DEVICES, 152
REAL TIME OPERATION, 18, 74, 101, 106, 107, 135
REATTACHED FLOW, 102
RECONNAISSANCE SPACECRAFT, 128
RECOVERY VEHICLES, 126
RECTIFICATION, 59
REENTRY, 20
REENTRY EFFECTS, 62, 158
REENTRY VEHICLES, 62, 126
REFLECTANCE, 87
REFRACTORY MATERIALS, 21, 40
REGENERATION (PHYSIOLOGY), 95
REGENERATIVE FUEL CELLS, 78, 80, 81
REGENERATORS, 80
REGULATIONS, 83
RELATIVISTIC ELECTRON BEAMS, 57
RELATIVITY, 133
RELIABILITY, 75, 81, 127
RELIABILITY ENGINEERING, 126, 128
REMOTE SENSING, 77, 89, 151
REMOTELY PILOTED VEHICLES, 15
RESCUE OPERATIONS, 123, 126
RESEARCH, 133
RESEARCH AND DEVELOPMENT, 109, 128
RESEARCH FACILITIES, 6
RESIDUAL STRENGTH, 9
RESIDUAL STRESS, 31, 74
RESILIENCE, 36
RESISTOJET ENGINES, 21
RESONANCE, 118
RESONANT FREQUENCIES, 19, 69
RESONANT TUNNELING, 147
RESOURCE ALLOCATION, 113
RESOURCES MANAGEMENT, 17
RESPONSE TIME (COMPUTERS), 110
RETURN TO EARTH SPACE FLIGHT, 126
REYNOLDS NUMBER, 68
RHENIUM, 19
RIBS (SUPPORTS), 9
RISK, 108, 130
ROBOT ARMS, 115
ROBOT SENSORS, 115
ROBOTS, 115
ROBUSTNESS (MATHEMATICS), 20, 21, 62
ROCKET ENGINES, 21
ROCKET PROPELLANTS, 21
ROSAT MISSION, 153
ROTARY STABILITY, 15
ROTATING PLASMAS, 142
ROTATION, 65
ROTOR AERODYNAMICS, 11
RUNGE-KUTTA METHOD, 64

S

SAFETY, 6, 26, 70
SALINITY, 90
SANDWICH STRUCTURES, 27
SATELLITE COMMUNICATION, 54
SATELLITE IMAGERY, 87, 106
SATELLITE OBSERVATION, 89
SATURN LAUNCH VEHICLES, 17
SCATTERING COEFFICIENTS, 85
SCATTERING CROSS SECTIONS, 136
SCATTERING FUNCTIONS, 150
SCHEDULING, 101
SCHOTTKY DIODES, 59
SCIENTIFIC VISUALIZATION, 111
SCINTILLATION, 82
SCINTILLATION COUNTERS, 82
SEA ICE, 77, 90
SEA SURFACE TEMPERATURE, 77
SEALS (STOPPERS), 36
SEATS, 6
SEDIMENTS, 64, 89
SEISMOLOGY, 85, 86
SEMANTICS, 106
SEMICONDUCTOR LASERS, 138
SEMICONDUCTORS (MATERIALS), 40, 57, 58, 137
SEPARATED FLOW, 65, 102
SEQUENCING, 86
SEQUENTIAL CONTROL, 107
SERVICE LIFE, 126
SERVICES, 72
SERVOMECHANISMS, 115
SET THEORY, 132
SHAFTS (MACHINE ELEMENTS), 70
SHALLOW WATER, 135
SHEAR STRENGTH, 19
SHEAR STRESS, 43
SHEARING, 66
SHELLS (STRUCTURAL FORMS), 72
SHOCK HEATING, 24
SHOCK LAYERS, 15
SHOCK LOADS, 43, 45, 46
SHOCK SPECTRA, 19
SHOCK WAVE INTERACTION, 42, 46
SHOCK WAVES, 3, 148, 155

SHOEMAKER-LEVY 9 COMET, 154
SHORT CIRCUITS, 79
SHOT PEENING, 31
SIGNAL ANALYSIS, 53
SIGNAL DETECTION, 94
SIGNAL PROCESSING, 53
SIGNAL TO NOISE RATIOS, 52
SIGNATURES, 90
SILICIDES, 33
SILICON, 68, 147
SILICON ALLOYS, 30
SILICON CARBIDES, 59
SILICON DIOXIDE, 40, 136
SILICON RADIATION DETECTORS, 67
SILVER, 28, 149
SIMULATION, 2, 26, 71, 98, 157
SINGLE CRYSTALS, 23, 30, 36, 40, 147, 149
SINGLE STAGE TO ORBIT VEHICLES, 123
SIS (SUPERCONDUCTORS), 67
SIZE (DIMENSIONS), 2
SLIDING FRICTION, 35
SLOPES, 118
SMALL SATELLITE TECHNOLOGY, 21
SNOW, 134
SOFTWARE DEVELOPMENT TOOLS, 105, 106, 109, 128
SOFTWARE ENGINEERING, 53, 103, 104, 106, 107, 114, 128
SOFTWARE RELIABILITY, 104
SOHO MISSION, 139
SOIL EROSION, 84
SOIL POLLUTION, 82, 84
SOILS, 84
SOL-GEL PROCESSES, 81
SOLAR ARRAYS, 80
SOLAR FLARES, 144
SOLAR MAGNETIC FIELD, 144
SOLAR OBSERVATORIES, 139
SOLAR PLANETARY INTER-ACTIONS, 160
SOLAR POWER SATELLITES, 123, 129
SOLAR SYSTEM, 159
SOLAR WIND, 160
SOLID ELECTROLYTES, 56
SOLID LUBRICANTS, 25, 38, 71
SOLID OXIDE FUEL CELLS, 78, 81
SOLID PROPELLANT COMBUSTION, 42
SOLID PROPELLANT IGNITION, 42, 44
SOLID PROPELLANT ROCKET ENGINES, 44
SOLID PROPELLANTS, 43, 46, 47
SOLID ROCKET PROPELLANTS, 41
SOLID STATE, 40, 148
SOLID STATE LASERS, 70
SOLID SURFACES, 148
SOLIDIFICATION, 133
SOLVATION, 28
SOLVENTS, 28
SORPTION, 35
SOUND PROPAGATION, 135
SOUND TRANSDUCERS, 60
SOUND WAVES, 135
SOUTHERN HEMISPHERE, 82
SOYUZ SPACECRAFT, 126
SPACE COMMERCIALIZATION, 129, 130
SPACE FLIGHT, 93, 151
SPACE LOGISTICS, 123, 124, 125, 126, 128, 132
SPACE MISSIONS, 123, 128
SPACE SHUTTLE ORBITERS, 17, 125, 127
SPACE SHUTTLES, 116, 124, 132
SPACE SURVEILLANCE (SPACE-BORNE), 128
SPACE TRANSPORTATION, 133
SPACE TRANSPORTATION SYSTEM FLIGHTS, 123
SPACEBORNE ASTRONOMY, 153, 155
SPACECRAFT DESIGN, 19
SPACECRAFT INSTRUMENTS, 21
SPACECRAFT LAUNCHING, 130
SPACECRAFT MAINTENANCE, 123
SPACECRAFT ORBITS, 20
SPACECRAFT POWER SUPPLIES, 78, 79
SPARE PARTS, 126, 130
SPARK MACHINING, 32
SPECIFIC IMPULSE, 21
SPECIFICATIONS, 107
SPECTRAL BANDS, 87, 155
SPECTRAL EMISSION, 156
SPECTROSCOPIC ANALYSIS, 58
SPECTROSCOPY, 58, 67, 155
SPECTRUM ANALYSIS, 87
SPEECH RECOGNITION, 101
SPIRAL GALAXIES, 156, 157
SPRAYED COATINGS, 25
SPUTTERING, 33
STABILITY, 29, 120
STABILITY TESTS, 118
STAGE SEPARATION, 19
STAINLESS STEELS, 35
STANDARDIZATION, 104
STANDARDS, 22
STARBURST GALAXIES, 156
STARK EFFECT, 118
STATIC LOADS, 26
STATIC PRESSURE, 3
STATIONKEEPING, 21
STATISTICAL ANALYSIS, 8, 122, 124, 125
STATISTICAL TESTS, 98
STEADY FLOW, 63
STEADY STATE, 60, 144, 150
STEELS, 31, 34, 50
STELLAR EVOLUTION, 155, 157
STELLAR MODELS, 157
STELLAR WINDS, 157
STELLARATORS, 142
STEREOSCOPIC VISION, 115
STOCHASTIC PROCESSES, 116, 121, 147
STORAGE TANKS, 80
STRAIN GAGES, 70
STRAIN RATE, 43
STRAPS, 34
STRATIGRAPHY, 86
STRATOSPHERE, 82
STRESS CONCENTRATION, 26
STRESS CORROSION, 31
STRESS DISTRIBUTION, 26
STRESS-STRAIN RELATIONSHIPS, 5, 35, 73, 74
STRUCTURAL ANALYSIS, 14, 28, 50, 72
STRUCTURAL DESIGN, 74
STRUCTURAL VIBRATION, 19, 74
SUBSTRATES, 57
SULFUR COMPOUNDS, 83
SULFUR DIOXIDES, 31
SULFUR HEXAFLUORIDE, 41
SUPERCOMPUTERS, 113, 114
SUPERCONDUCTING DEVICES, 56
SUPERCONDUCTING FILMS, 67, 141
SUPERCONDUCTIVITY, 146
SUPERCRITICAL FLUIDS, 41
SUPERNOVAE, 157
SUPERSONIC FLIGHT, 4
SUPERSONIC FLOW, 68, 69
SUPERSONIC INLETS, 62
SUPERSONIC JET FLOW, 5, 62
SUPERSONIC TRANSPORTS, 7, 9
SUPPORT SYSTEMS, 72, 123, 127
SURFACE EMITTING LASERS, 60
SURFACE GEOMETRY, 120
SURFACE PROPERTIES, 35, 37, 77, 90, 121
SURFACE REACTIONS, 27, 63
SURFACE ROUGHNESS, 2, 88
SURFACE TEMPERATURE, 77
SURFACE TREATMENT, 31

SURVEYS, 15, 50
SYMMETRY, 147
SYNCHRONISM, 51
SYNCHROTRON RADIATION, 149
SYNTAX, 106
SYNTHESIS (CHEMISTRY), 40
SYNTHETIC APERTURE RADAR, 90
SYSTEM IDENTIFICATION, 132
SYSTEMS ANALYSIS, 126
SYSTEMS COMPATIBILITY, 123
SYSTEMS ENGINEERING, 103, 105, 106, 107
SYSTEMS HEALTH MONITORING, 26, 127
SYSTEMS INTEGRATION, 10, 123
SYSTEMS MANAGEMENT, 112
SYSTEMS SIMULATION, 124

T

TACTICS, 9
TANTALUM, 55
TARGET RECOGNITION, 115, 122, 140
TASKS, 101
TATB, 46
TECHNOLOGIES, 133
TECHNOLOGY TRANSFER, 58, 129
TECHNOLOGY UTILIZATION, 81, 131
TEFLON (TRADEMARK), 45
TELECOMMUNICATION, 51
TELEMETRY, 56
TELESCOPES, 108
TELEVISION SYSTEMS, 141
TEMPERATURE EFFECTS, 17
TEMPERATURE MEASUREMENT, 10
TEMPERATURE PROFILES, 145, 146
TEMPORAL DISTRIBUTION, 56
TENSILE STRENGTH, 19, 25, 32, 34
TENSILE TESTS, 34
TERMINAL BALLISTICS, 73
TEST FACILITIES, 22
TETHERING, 14
THEOREM PROVING, 105
THEOREMS, 117
THERMAL ANALYSIS, 150
THERMAL CYCLING TESTS, 130
THERMAL DECOMPOSITION, 46, 47, 48, 49
THERMAL DEGRADATION, 47, 49
THERMAL EMISSION, 154
THERMAL ENVIRONMENTS, 46
THERMAL EXPANSION, 25, 40
THERMAL PROTECTION, 15
THERMAL VACUUM TESTS, 139
THERMITES, 45
THERMOCHEMISTRY, 48
THERMOCOUPLES, 10, 68
THERMODYNAMICS, 26, 134
THERMOELECTRIC COOLING, 30, 138
THERMOELECTRICITY, 30
THERMOPHYSICAL PROPERTIES, 41
THERMOSPHERE, 86
THICKNESS, 77
THIN FILMS, 18, 35, 59, 67, 149
THREAT EVALUATION, 122
THREE DIMENSIONAL BOUNDARY LAYER, 4
THREE DIMENSIONAL FLOW, 9, 11
THREE DIMENSIONAL MODELS, 115
THRUST AUGMENTATION, 3
TILT ROTOR AIRCRAFT, 10
TILTING ROTORS, 10
TIME CONSTANT, 18
TIME DEPENDENCE, 63, 125, 127, 137
TIME MEASUREMENT, 51
TIME SERIES ANALYSIS, 90
TIME SIGNALS, 53, 90
TITANIUM ALLOYS, 32, 147
TITANIUM CARBIDES, 32
TOKAMAK DEVICES, 142, 145
TOLERANCES (MECHANICS), 9
TOMOGRAPHY, 85
TOOLS, 105, 111, 112
TOPOGRAPHY, 85, 159
TOROIDAL PLASMAS, 142, 145
TOTAL QUALITY MANAGEMENT, 123, 132
TOWED BODIES, 14
TRAFFIC, 114
TRAJECTORIES, 6, 120
TRAJECTORY CONTROL, 18
TRANSDUCERS, 60
TRANSISTORS, 147
TRANSITION METALS, 33
TRANSMISSION LINES, 139
TRANSMISSION LOSS, 135
TRANSMISSIONS (MACHINE ELEMENTS), 71
TRANSMITTERS, 60, 114
TRANSONIC FLOW, 11
TRIBOLOGY, 25, 35, 38, 71, 148
TROPICAL REGIONS, 88
TUNGSTEN, 35
TUNGSTEN ALLOYS, 73
TURBINE BLADES, 11, 13
TURBINE ENGINES, 10
TURBOFAN ENGINES, 26
TURBOMACHINERY, 11, 13, 70
TURBULENCE, 41, 86
TURBULENCE EFFECTS, 41
TURBULENT BOUNDARY LAYER, 3, 4, 5, 66, 68
TURBULENT COMBUSTION, 12
TURBULENT FLOW, 64, 68
TURBULENT MIXING, 66
TURBULENT WAKES, 63
TWO FLUID MODELS, 117

U

ULTRAHIGH VACUUM, 35, 38
ULTRASONIC WAVE TRANSDUCERS, 67, 69
ULTRASONICS, 141
ULTRAVIOLET ABSORPTION, 27
UNDERWATER ACOUSTICS, 58, 64, 135, 141
UNDERWATER EXPLOSIONS, 73
UNDERWATER VEHICLES, 50, 81
UNIX (OPERATING SYSTEM), 112
UNSTEADY AERODYNAMICS, 11, 13
UNSTEADY FLOW, 11, 63
UNSTRUCTURED GRIDS (MATHEMATICS), 109, 110, 111
UPWIND SCHEMES (MATHEMATICS), 60
USER MANUALS (COMPUTER PROGRAMS), 71
USER REQUIREMENTS, 128, 132

V

VACUUM, 27
VAPOR DEPOSITION, 27, 38, 149
VARIABLE STARS, 155
VARIATIONAL PRINCIPLES, 150
VELOCITY DISTRIBUTION, 65
VELOCITY MEASUREMENT, 65
VENTING, 42
VENUS (PLANET), 159
VESTA ASTEROID, 155
VESTIBULES, 94
VIBRATION, 74, 118, 137
VIBRATION DAMPING, 70
VIBRATION TESTS, 139
VINYLIDENE, 37
VIRTUAL REALITY, 108
VISCOUS FLOW, 148
VISIBILITY, 116
VISUAL FIELDS, 97
VISUAL FLIGHT RULES, 7
VISUAL PERCEPTION, 97, 99

VISUAL SIGNALS, 51
VORTEX GENERATORS, 2, 4
VORTICES, 63

W

WAKES, 13, 65
WALL FLOW, 95
WASTE DISPOSAL, 82
WASTE TREATMENT, 84
WATER FLOW, 76, 150
WATER POLLUTION, 82
WATER VAPOR, 55
WAVE INTERACTION, 86
WAVE PROPAGATION, 22, 63, 85, 135
WAVE REFLECTION, 61
WAVE SCATTERING, 64
WAVEGUIDES, 60
WAVELET ANALYSIS, 90
WEAPONS, 122
WEAR, 25
WEAR RESISTANCE, 35, 38
WEATHER FORECASTING, 89, 106
WEIGHTLESSNESS, 93, 95
WELLS, 35, 137
WHITE DWARF STARS, 153, 157
WHITE NOISE, 85
WIND SHEAR, 89
WIND TUNNEL MODELS, 6, 16
WIND TUNNEL TESTS, 2, 11, 15, 16, 17, 65, 68, 95
WIND TUNNEL WALLS, 95
WIND VELOCITY, 89, 90
WINDS ALOFT, 89
WING PANELS, 5
WING SPAN, 4
WING TIPS, 65
WINGS, 9
WORDS (LANGUAGE), 101
WORKLOADS (PSYCHOPHYSIOLOGY), 101
WORLD WIDE WEB, 95, 104, 113
WOVEN COMPOSITES, 34

X

X RAY ANALYSIS, 32, 147
X RAY BINARIES, 157
X RAY DIFFRACTION, 31, 40, 149
X RAY SOURCES, 153, 157
X RAY SPECTRA, 40, 157
X RAY SPECTROSCOPY, 33, 146

Y

YAG LASERS, 69
YIELD STRENGTH, 32